1. A method comprising:

allowing a first, a second, a third, and a fourth component of an electrical circuit to assemble in a non-planar arrangement of components, in the absence of any external net force applied to any of the first, second, third, or fourth components in the direction of any others of the first, second, third, or fourth components, thereby forming at least one electrical circuit that traverses at least one portion of each of the first, second, third, and fourth components.

2. A method as in claim 1, comprising allowing the first, second, third, and fourth components to assemble under set conditions to form an interconnected assembly that is inseparable under the set conditions.

3. A method as in claim 1, wherein each of the first, second, third, and fourth components includes a mating surface that matches a mating surface of at least one other of the first, second, third, and fourth components, the method comprising allowing each of the first, second, third, and fourth components to fasten to at least one other of the first, second, third, or fourth components via matching mating surfaces thereby forming the non-planar arrangement of components.

4. A method as in claim 3, further comprising providing a fifth component and allowing the first, second, third, fourth, and fifth components to assemble in a non-planar arrangement of components, in the absence of any external net force applied to any of the first, second, third fourth, or fifth components in the direction of any others of the first, second, third fourth, or fifth components, thereby forming at least one electrical circuit that traverses at least one portion of each of the first, second, third fourth, and fifth components.

5. A method as in claim 1, the allowing step comprising causing the first, second, third, and fourth components to undergo random contact interactions with each other until the non-planar arrangement of components is formed.

6. A method as in claim 3, the allowing step involving providing the first, second, third, and fourth components in a fluid that is incompatible with the mating surfaces, and allowing the mating surfaces to mate thereby minimizing contact between the fluid and the mating surfaces.

7. A method as in claim 3, wherein each of the first, second, third, and fourth components includes an electrical conductor, the allowing step involving allowing the mating surfaces to mate and the electrical conductors of the respective components to be connected electrically.

8. A method as in claim 7, wherein each of the first, second, third, and fourth components includes an electrical device in electrical communication with electrical connector of the component, the allowing step involving establishing electrical communication between the electrical devices of the respective components thereby creating an electrical circuit useful for an electrical function.

9. A method as in claim 3, the allowing step comprising allowing a mating surface of the first component to contact a mating surface of the second component reversibly under the set conditions until the first mating surface is in register with and fastens to the second mating surface irreversibly under the set conditions.

10. An article comprising a non-planar assembly of at least a first, a second, a third, and a fourth component that together define an electrical circuit traversing at least one portion of each of the first, second, third, and fourth components, wherein the first, second, third, and fourth components are constructed and arranged to have the ability, individually, in the absence of any external net force applied to any of the first, second, third, or fourth components in the direction of any others of the first, second, third, or fourth components, to form the assembly.

11. An article as in claim 10, the component articles each having a dimension of at least about 250 nm.

12. An article as in claim 10, the component articles each having a dimension of at least about 500 nm.

13. An article as in claim 10, comprising a self-assembled composite of at least five separate component circuit articles.

14. An article as in claim 10, wherein at least one of the separate component circuit articles has a dimension of at least 150 nm.

15. An article as in claim 10, wherein at least two of the component articles have dimensions of at least one micron.